

## EAST Search History

## EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	37	((YOSHIYUKI) near2 (SUZURI)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2010/07/21 10:01
L2	148	((HIROSHI) near2 (KITA)). INV.	US-PGPUB; USPAT; USOCR	OR	ON	2010/07/21 10:01
L3	1	((AKI) near2 (NAKATA)). INV.	US-PGPUB; USPAT; USOCR	OR	ON	2010/07/21 10:02
L4	149	(1 2 3)	US-PGPUB; USPAT; USOCR	OR	ON	2010/07/21 10:02
L5	0	4 and (hole blocking layer percent by weight 20% content phosphorescent compound light emitting electron).dm.	US-PGPUB; USPAT; USOCR	AND	ON	2010/07/21 10:14
L6	0	4 and (hole blocking layer percent by weight content phosphorescent compound light emitting electron).dm.	US-PGPUB; USPAT; USOCR	AND	ON	2010/07/21 10:14
L7	40512	{313/498-512 315/169.1,169.3 428/690- 691,917 438/26-29,34,82 257/40,72,98-100,642- 643,759 427/66,532- 535,539).cds.	US-PGPUB; USPAT; USOCR	OR	ON	2010/07/21 10:15
L8	1175	7 and "hole blocking" and "electron blocking"	US-PGPUB; USPAT; USOCR	OR	ON	2010/07/21 10:16
L9	3	8 and ("hole blocking" and "electron blocking") with (("%" per\$1cent\$3) near3 weight))	US-PGPUB; USPAT; USOCR	OR	ON	2010/07/21 10:17
L10	6	("OLED" "OLED" "organic electroluminescent" "organic EL") and ("hole blocking" "HBL" "electron blocking" "EBL") and weight and ("%" percent\$3)	EPO; JPO; DERWENT	OR	ON	2010/07/21 10:19
L11	1	("6803720").pn.	US-PGPUB; USPAT; USOCR	OR	ON	2010/07/21 10:24
L12	11	("3093796" "63264692" "03255190" "2000021572" "02071813" "0247457").pn.	EPO; JPO; DERWENT	OR	ON	2010/07/21 10:28
S1	29131	{313/498-512 315/169.1,169.3 428/690- 691,917 438/26-29,34,82 257/40,72,98-100,642- 643,759 427/66,532- 535,539).cds.	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/18 16:23

S2	4350220	@ad< "20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/18 16:25
S3	1091	(electroluminescen\$2) and (hole near1 block\$3) and (electron near1 block\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/18 16:27
S4	269	S1 and S2 and S3	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/18 16:28
S5	42	(electroluminescen\$2) and (hole near1 block\$3) and (electron near1 block\$3)	EPO; JPO; DERWENT	OR	ON	2008/03/18 16:28
S6	22	S5 and @ad< "20030723"	EPO; JPO; DERWENT	OR	ON	2008/03/18 16:28
S7	22	S4 S6	EPO; JPO; DERWENT	OR	ON	2008/03/18 16:29
S8	269	S4 and (electron near1 block \$3)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/18 16:33
S9	1211	S1 and (electron near1 block \$3)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/18 16:36
S10	790	S1 and ("electron blocking")	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/18 16:36
S11	250	S10 and S2	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/18 16:37
S12	180	S11 and ("hole blocking")	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/18 16:38
S13	180	S12 and S1	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/18 16:38
S14	29131	{313/498-512 315/169.1,169.3 428/690- 691,917 438/26-29,34,82 257/40,72,98-100,642- 643,759 427/66,532- 535,539).cds.	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/19 06:20
S15	4350220	@ad< "20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/19 06:20
S16	790	S14 and ("electron blocking")	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/19 06:20
S17	250	S16 and S15	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/19 06:20
S18	180	S17 and ("hole blocking")	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/19 06:20
S19	30	S18 and ((phosphor\$6 fluorescent) near20 ("blocking"))	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/19 06:20
S20	180	S18 and (("hole blocking") near1 contain\$3 consist\$3 made include\$1)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/19 06:42
S21	5	S18 and (("hole blocking") near1 (contain\$3 consist\$3 made include\$1))	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/19 06:44

S22	23	S16 and (("electron blocking") near1 (contain\$3 consist\$3 made include\$1))	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/19 06:51
S23	6	S22 and @ad< "20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/19 06:53
S24	3	("6750608" "5294869" "20020134984").pn.	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/19 07:15
S25	2	("20020134984"   "5294869").FN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/19 07:23
S26	34	S16 and (("hole blocking") near2 compris\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/19 07:43
S27	0	S16 and (("hole blocking") near2 iridium)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/19 08:04
S28	0	S16 and (("hole blocking") near5 iridium)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/19 08:04
S29	10	S16 and (("hole blocking") near10 iridium)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/19 08:04
S30	2	("20020134984"   "5294869").FN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/19 08:15
S31	1	"20040115476"	US-PGPUB	OR	ON	2008/03/19 08:16
S32	29	S16 and Firpic	US-PGPUB	OR	ON	2008/03/19 08:36
S33	1	"20030059647"	US-PGPUB	OR	ON	2008/03/19 09:11
S34	2	S16 and (dop\$3 near10 weight near20 ("hole blocking") near20 (emiss\$4 emit\$3 EL))	US-PGPUB	OR	ON	2008/03/19 09:54
S35	8	S16 and (("hole blocking") near10 plural\$3)	US-PGPUB	OR	ON	2008/03/19 10:21
S36	1	"20040048101"	US-PGPUB	OR	ON	2008/03/19 10:50
S37	1	"20030059647"	US-PGPUB	OR	ON	2008/03/19 10:57
S38	0	S15 and (("electron blocking") near5 (phosphor \$6 fluorescent))	US-PGPUB	OR	ON	2008/03/19 11:07
S39	3	S15 and (("electron blocking") near10 (phosphor \$6 fluorescent))	US-PGPUB	OR	ON	2008/03/19 11:07
S40	36	S15 and (("electron blocking") near10 (compris \$3 made consist\$3 includ \$3))	US-PGPUB	OR	ON	2008/03/19 11:09
S41	32	S15 and (("electron blocking") near5 (compris\$3 made consist\$3 includ\$3))	US-PGPUB	OR	ON	2008/03/19 11:09
S42	22	S15 and (("electron blocking") near2(compris\$3 made consist\$3 includ\$3))	US-PGPUB	OR	ON	2008/03/19 11:09

S43	31	("electron blocking") near10 (phosphor\$6 fluorescent)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/19 11:21
S44	1098	(electroluminescen\$2) and (hole near1 block\$3) and (electron near1 block\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 11:17
S45	52	S44 and ("Firpic")	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 11:17
S46	41	S45 and (Firpic near10 (emiss\$3 emit\$3))	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 11:18
S47	17	S46 and @ad< "20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 11:19
S48	700	S44 and (electron near1 blocking)	US-PGPUB	OR	ON	2008/03/25 12:03
S49	26	S48 and ((electron near1 blocking) near20 (phosphor \$6))	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 12:04
S50	4	S49 and @ad< "20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 12:08
S51	993	S44 and (electron near1 blocking)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 12:12
S52	8	S51 and ((electron near1 blocking) near5 (Firpic Ir (ppy)))	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 12:12
S53	0	S52 and ("Ir(ppy)")	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 12:13
S54	48	S51 and Irppy	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 12:14
S55	0	S54 and ((electron near1 blocking) near10 Irppy)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 12:15
S56	0	S54 and ((electron near1 blocking) near20 Irppy)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 12:15
S57	13	S54 and ("white light")	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 12:25
S58	9	S44 and ("hole blocking layer") near10 plurality	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 12:29
S59	4493	(428/690,917).cds.	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 12:50
S60	782	S59 and ((electron charge exciton) near1 block\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 12:50
S61	81	S59 and ((electron near1 block\$3) near5 (consist\$4 compris\$3 made includ\$3))	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 12:52
S62	22	S61 and @ad< "20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 12:52
S63	0	S60 and ((electron near1 block\$3) near5 plurality)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 13:16

S64	0	S60 and ((electron near1 block\$3) near10 plurality)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 13:17
S65	5	S60 and ((electron near1 block\$3) near10 (multiple many several plurality))	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 13:17
S66	1503	((electron charge exciton hole) near1 block\$3) near20 (light near1 emi\$5)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 13:26
S67	454	S66 and @ad< "20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 13:27
S68	376	S67 and (fluorescent luminescent phosphorescen \$2)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 13:27
S69	0	S68 and ("amount of light emitted")	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 13:32
S70	25	S68 and (light adj emitted) near10 (amount range)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 13:34
S71	0	((hole electron charge exciton) near1 block\$3) and (light adj emitted) near10 (amount percent\$3 range)	EPO; JPO; DERWENT	OR	ON	2008/03/25 13:40
S72	1	((hole electron charge exciton) near1 block\$3) and ((light adj emitted) near20 (amount percent\$3 range))	EPO; JPO; DERWENT	OR	ON	2008/03/25 13:41
S73	245	S48 and ("liquid crystal")	US-PGPUB	OR	ON	2008/03/25 14:53
S74	411	S60 and ("blocking layer")	US-PGPUB	OR	ON	2008/03/25 14:55
S75	563	S60 and ("blocking layer")	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 14:55
S76	145	S75 and ("liquid crystal")	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 14:55
S77	63	S76 and @ad< "20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 15:08
S78	1	S75 and (multiple near1 hole)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 15:34
S79	172	("hole blocking") near10 (multiple plural\$3 several many numerous)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 15:37
S80	57	S79 and @ad< "20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/25 15:37
S81	19496	(hole near1 block\$3)	US-PGPUB; USPAT; USOCR; FPBS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 09:36

S82	3013	S81 and (OLED OLED electroluminescen\$2)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 09:36
S83	982	S82 and @ad<"20030723"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 09:36
S84	54	S83 and ((hole near1 block \$3) near3 (first second one two))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 09:39
S85	0	S83 and (second near1 ("hole blocking"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 09:43
S86	18	(second near1 ("hole blocking"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 09:44
S87	11	(second near1 ("exciton blocking"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 09:48
S88	7	("hole blocking layer 2")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 10:15
S89	1	*7022421*.pn.	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/26 11:22
S90	7065	(Ga(pma)*.sub.3") near40 (phosphor scintillat\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/26 11:33
S91	5955	(Ga(pma)*.sub.3") near40 (phosphor)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/26 11:34
S92	2803	(Ga(pma)*.sub.3") near5 (phosphor)	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/26 11:34
S93	0	("Ga(pma)") near5 phosphor	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/26 11:35
S94	0	("Ga(pma)") near40 phosphor	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/26 11:35

S95	0	("Ga(pma)") near40 phosphor	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 11:36
S96	0	("Ga\$pm") near40 phosphor	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 11:36
S97	0	Ga near3 ".sub.3" near40 phosphor	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 11:37
S98	67	("electron blocking") near20 (phosphor luminescent fluorescent)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 11:59
S99	7	("electron blocking") near10 (PVK)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 12:12
S100	29	(PVK) near10 ("emissive layer") ("emission layer")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 12:31
S101	12	S100 and @ad< "20030723"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 12:35
S102	10	("hole blocking") near10 (PVK Ir\$1ppy)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 13:09
S103	2308308	(amount light hole blocking layer range ("0.1 to 50%") emitting).dm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 14:03

S104	0	{amount light hole blocking layer range ("0.1 to 50%") emitting).dm.	US-PGPUB; USPAT; USOCR; FPPS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2008/03/26 14:03
S105	0	{amount light electron blocking layer range ("0.1 to 50%") emitting).dm.	US-PGPUB; USPAT; USOCR; FPPS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2008/03/26 14:04
S106	17	"20030059647" "6580213" "20040043251"	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/26 14:45
S107	3	("20030059647" "6580213" "20040043251").pn.	US-PGPUB; USPAT; USOCR	OR	ON	2008/03/26 14:47
S108	1	S102 and liu.in.	US-PGPUB; USPAT; USOCR; FPPS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 14:48
S109	0	S101 and liu.in.	US-PGPUB; USPAT; USOCR; FPPS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 14:48
S110	0	S100 and liu.in.	US-PGPUB; USPAT; USOCR; FPPS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 14:49
S111	18	{second near1 ("hole blocking"))	US-PGPUB; USPAT; USOCR; FPPS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 14:50
S112	1	S111 and liu.in.	US-PGPUB; USPAT; USOCR; FPPS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 14:50
S113	1	S102 and liu.in.	US-PGPUB; USPAT; USOCR; FPPS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 14:51



S114	430	Jie and liu.in.	US-PGPUB; USPAT; USOCR; FPPS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 14:53
S115	162	S114 and @ad<"20030723"	US-PGPUB; USPAT; USOCR; FPPS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 14:53
S116	0	S115 and ("hole blocking")	US-PGPUB; USPAT; USOCR; FPPS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 14:54
S117	0	S115 and PVK	US-PGPUB; USPAT; USOCR; FPPS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 14:54
S118	20	S114 and PVK	US-PGPUB; USPAT; USOCR; FPPS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 14:54
S119	10	("hole blocking") near10 (PVK l r\$1ppy)	US-PGPUB; USPAT; USOCR; FPPS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 15:01
S120	4	S119 and @ad<"20030723"	US-PGPUB; USPAT; USOCR; FPPS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 15:01
S121	4	((PVK near20 ("hole blocking"))) and @ad<"20030723"	US-PGPUB; USPAT; USOCR; FPPS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 15:03
S122	12	((PVK l r\$1ppy Firpic) near20 ("hole blocking")) and @ad<"20030723"	US-PGPUB; USPAT; USOCR; FPPS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 15:35

S123	41	(Firpic) near20 (("emission layer") ("emitting layer"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 15:41
S124	3	S123 and @ad< "20030723"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 15:41
S125	2	"20020182441".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/26 16:17
S126	1	"20020182441".pn.	US-PGPUB	OR	ON	2008/03/26 16:17
S127	176	("hole blocking") near2 (("2") second)	US-PGPUB; USPAT; USOCR	OR	ON	2008/04/01 07:54
S128	24	("hole blocking") near2 (("2") second)	EPO; JPO; DERWENT	OR	ON	2008/04/01 07:54
S129	294	(hole near1 block\$3 near2 second)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/04/01 07:57
S130	181	S129 and @ad< "20030723"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/04/01 07:57
S131	1	(organic electroluminescent anode cathode light emitting layer phosphorescent hole blocking adjacent range "0.1" 50% electron amount). clm.	US-PGPUB; USPAT; USOCR	AND	ON	2008/04/08 16:21
S132	1	(organic electroluminescent anode cathode light emitting layer phosphorescent hole blocking adjacent range "0.1" 50% electron amount). clm.	US-PGPUB; USPAT; USOCR	AND	ON	2008/04/08 16:21
S133	1	"6541909".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2008/04/14 08:40
S134	3126	("hole blocking layers")	US-PGPUB; USPAT; USOCR	OR	ON	2008/04/14 11:26

S135	452	S134 and (electroluminescent OLED OELD) and @ad<"20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2008/04/14 11:27
S136	448	S134 and (electroluminescent OLED OELD) and @ad<"20030723"	US-PGPUB; USPAT; USOCR	OR	OFF	2008/04/14 11:28
S137	35	S135 and (second with ("hole blocking"))	US-PGPUB; USPAT; USOCR	OR	OFF	2008/04/14 11:29
S138	1	"6951694".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2008/04/15 06:57
S139	1	"6541909".pn.	USPAT	OR	ON	2008/04/15 07:03
S140	3	("6541909" "20020197554" "6951694").pn.	US-PGPUB; USPAT; USOCR	OR	ON	2008/04/15 13:35
S141	47	((("hole blocking") with ("% percent)) and (emit\$ with ("% percent)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/30 08:25
S142	13	("20020038867"   "20040146744"   "4356429"   "4539507"   "4720432"   "4769292"   "5093698"   "5247190"   "5601903"   "5807627"   "6423429"   "6566807"   "6589673").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 08:39
S143	4	("6268965"   "6497598"   "6670772"   "6699597").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 08:44
S144	8	("20030091860"   "20040056266"   "20040066135"   "20040094452"   "20040110031"   "20040214041"   "6358633"   "6750608").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 08:45
S145	9	("20010052751"   "5466950"   "6281627"   "6338908"   "6458475"   "6541909"   "6566807"   "6693352"   "6916554").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 08:47

S146	35	("20010053462"   "20020050786"   "20020071963"   "20030170491"   "5231329"   "5540999"   "5703436"   "5707745"   "5721160"   "5756224"   "5757026"   "5757139"   "5811833"   "5834893"   "5837391"   "5844363"   "5861219"   "5874803"   "5917280"   "5922396"   "5932895"   "5953587"   "5981306"   "5986268"   "5986401"   "5998803"   "6005252"   "6013538"   "6013982"   "6097147"   "6303238"   "6420031"   "6469437"   "6580213"   "7009338").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 08:48
S147	5	("20030143430"   "4760006"   "5366811"   "5466392"   "6541129").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 08:50
S148	6	("5701055"   "5742129"   "5909081"   "5952037"   "6114088"   "6373182").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 08:51
S149	17	("20020134984"   "20030230980"   "4769292"   "5247190"   "5703436"   "5707745"   "5834893"   "5844363"   "6013982"   "6087196"   "6091195"   "6097147"   "6294398"   "6303238"   "6337102"   "6468819"   "6565994").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 08:53
S150	5	("4951041"   "5296920"   "5479272"   "5684365"   "6400347").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 08:55
S151	4	("5393614"   "6010796"   "6310360"   "6312836").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 08:55
S152	6	("5457565"   "5684365"   "5739635"   "5952779"   "5969474"   "6180963").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 08:56
S153	5	("5457565"   "5648181"   "5820996"   "5952779"   "5969474").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 08:57
S154	1	"20030059647".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 09:02
S155	1	"6541909".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 09:07
S156	47	((("hole blocking") with ("%" percent)) and (emit\$5 with ("%" percent)))	US-PGPUB; USPAT; USOCR; FPBS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/30 12:54

S157	12	S156 and @ad<"20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 12:54
S158	5	((hole near1 block\$3) with (lumen luminosity))	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 13:04
S159	0	((electron near1 block\$3) with (lumen luminosity))	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 13:05
S160	0	((electron near1 block\$3) with (lumen luminosity))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/30 13:05
S161	5	((hole near1 block\$3) with (lumen luminosity))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/30 13:05
S162	7	((("electron blocking") with ("%" percent)) and (emit\$5 with ("% percent)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/30 13:09
S163	111	((suzuri).in. with yoshiyuki) ((kita).in. with hiroshi) ((nakata).in. with aki)	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 14:26
S164	35	S163 and (hole near1 blocking) and "%" and light and emitting	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 14:28
S165	30	S164 and phosphorescent	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 14:28
S166	111	((suzuri).in. with yoshiyuki) ((kita).in. with hiroshi) ((nakata).in. with aki)	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/30 14:31
S167	0	S166 and (hole blocking %" light emitting).dm.	US-PGPUB; USPAT; USOCR	AND	ON	2008/12/30 14:31
S168	1	S166 and (organic electroluminescent element anode cathode phosphorescent hole blocking light emitting amount layer).dm.	US-PGPUB; USPAT; USOCR	AND	ON	2008/12/30 14:33
S169	1	"6541909".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 09:09
S170	4798	(428/690,917).cds.	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 09:27
S171	915	S170 and (phosphor\$8 with dop\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 09:28
S172	332	S171 and @ad<"20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 09:28

S173	11	S172 and ((hole near1 block \$3) with dop\$4 with phosphor\$8)	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 09:33
S174	857856	(Firpic Ir(ppy))	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 10:40
S175	1481	S174 and (428/690,917). ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 10:40
S176	506	S175 and @ad< "20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 10:40
S177	346	(Firpic "Ir(ppy)")	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 10:42
S178	138	S177 and (428/690,917). ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 10:43
S179	27	S178 and @ad< "20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 10:43
S180	9	(firpic near4 phosphor)	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 10:48
S181	9	(firpic near4 phosphor)	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 12:12
S182	0	S181 and (("electron block \$3") with Firpic)	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 12:12
S183	32430	{313/498-512 315/169.1,169.3 428/690- 691,917 438/26-29,34,82 257/40,72,98-100,642- 643,759 427/66,532- 535,539).ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 12:13
S184	961	S183 and ("electron blocking")	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 12:13
S185	0	S184 and (("electron block \$3") with Firpic)	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 12:13
S186	0	((("electron block\$3") with Firpic)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/01/06 12:13
S187	7	((electron near1 block\$3) with Firpic)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/01/06 12:14
S188	0	((electron near1 block\$3) with "Ir(ppy).sub.3")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/01/06 12:20

S189	0	((electron near1 block\$3) with "Ir(ppy)")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/01/06 12:20
S190	136	((electron near1 block\$3) with phosphor\$8)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/01/06 12:20
S191	346	(Firpic "Ir(ppy)")	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 12:25
S192	138	S191 and (428/690,917). ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 12:25
S193	27	S192 and @ad< "20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 12:25
S194	25	S193 and (emissive with Ir (ppy)".sub.3")	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 12:25
S195	1	"20030124381".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 15:07
S196	1	"20030068528".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 15:10
S197	1	"20030059647".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/06 15:38
S198	3	("20030068528" "20050170621" "20030124381").pn.	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/07 06:50
S199	1	"6803720".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2009/01/07 06:53
S200	10	((("light emitting") luminescent) near1 (layer film)) with ("% per\$1cent\$3) with dopant with "hole blocking"	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/03 10:00
S201	156	("hole blocking") with ("% per\$1cent\$3) with dop\$3	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/03 10:11
S202	146	S201 not S200	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/03 10:11
S203	322	("hole blocking") with ("% per\$1cent\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/03 10:25
S204	176	S203 not S202	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/03 10:25
S205	22	("electron blocking") with ("% per\$1cent\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/03 12:21
S206	67	("electron blocking" "EBL") with ("% per\$1cent\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/03 12:23
S207	45	S206 not S205	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/03 12:23

S208	380	("hole blocking" "HBL") with ("%" per\$1cent\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/03 12:27
S209	322	("hole blocking") with ("%" per\$1cent\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/03 12:27
S210	58	S208 not S209	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/03 12:27
S211	0	("electron blocking" "EBL") with ("%" per\$1cent\$3)	FPRS; EPO; JPO; DERWENT	OR	ON	2009/08/03 14:21
S212	11	("hole blocking" "HBL") with ("%" per\$1cent\$3)	FPRS; EPO; JPO; DERWENT	OR	ON	2009/08/03 14:22
S213	31	((YOSHIYUKI) near2 (SUZURI)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/03 14:24
S214	125	((HIROSHI) near2 (KITA)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/03 14:25
S215	1	((AKI) near2 (NAKATA)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/03 14:25
S216	126	(S213 S214 S215)	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/03 14:25
S217	1	S216 and ("0.1" 50% amount light emitted layer).dm.	US-PGPUB; USPAT; USOCR	AND	ON	2009/08/03 14:29
S218	1	"20020180347".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/10 08:17
S219	162	(hole near1 block\$3) with (lumen luminosity brightness transmittance transmission)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/08/11 06:48
S220	49	(electron near1 block\$3) with (lumen luminosity brightness transmittance transmission)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/08/11 06:48
S221	6	S219 and S220	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/08/11 06:48
S222	1	(hole near1 block\$3) with (lumen luminosity brightness transmittance transmission) with ("%" per\$1cent\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/08/11 06:50
S223	1	(hole near1 block\$3) near40 ((lumen luminosity brightness transmittance transmission) with ("%" per\$1cent\$3))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/08/11 06:51



S224	0	S223 not S222	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/08/11 06:52
S225	7	((hole near1 block\$3) near40 ((lumen luminance luminosity brightness transmittance transmission) with ("% per\$1cent\$3))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/08/11 06:53
S226	8	((hole near1 block\$3) near40 ((efficiency lumen luminance luminosity brightness transmittance transmission) with ("% per \$1cent\$3))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/08/11 07:03
S227	7	((hole near1 block\$3) near40 ((lumen luminance luminosity brightness transmittance transmission) with ("% per\$1cent\$3))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/08/11 07:04
S228	1	S226 not S227	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/08/11 07:04
S229	1	"20020191131".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/11 10:38
S230	3277	("color filter") with (recess groove ditch opening)	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/11 11:00
S231	1184	S230 and @ad< "20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/11 11:01
S232	945	S231 and display	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/11 11:01
S233	132	S230 and ("adhesive film" "adhesive layer")	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/11 13:08
S234	43	S233 and @ad< "20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/11 13:08
S235	4	S234 and (adhesive with recess)	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/11 13:16
S236	86	("color filter" with (groove recess ditch opening)) and (adhesive with (groove recess ditch opening))	US-PGPUB; USPAT; USOCR	OR	ON	2009/08/11 13:19

S237	106	("color filter" with (groove recess ditch opening)) and (adhesive with (groove recess ditch opening))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/08/11 13:19
S238	61	("two part" with "color filter")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/08/11 13:41
S239	37598	{313/498-512 315/169.1,169.3 428/690- 691,917 438/26-29,34,82 257/40,72,98-100,642- 643,759 427/66,532- 535,539}.cls.	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/01 13:57
S240	2723	S239 and "hole blocking"	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/01 13:58
S241	2736	S239 and ("hole blocking" "HBL")	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/01 13:58
S242	1925	S241 and (dopant doping)	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/01 13:58
S243	32	S242 and ((dopant doping) with (weight near1 percent \$3))	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/01 13:59
S244	32	S242 and ((dopant doping) with (weight near3 percent \$3))	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/01 14:15
S245	2260	S241 and (dopant doping doped)	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/01 14:16
S246	335	S245 not S242	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/01 14:16
S247	0	S246 and ((dopant doping) with (weight near3 percent \$3))	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/01 14:16
S248	1	S246 and ((dopant doping doped) with (weight near3 percent\$3))	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/01 14:17
S249	33	((YOSHIYUKI) near2 {SUZURI}).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/01 14:19
S250	136	((HIROSHI) near2 (KITA)). INV.	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/01 14:19
S251	1	((AKI) near2 (NAKATA)). INV.	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/01 14:19
S252	0	(S249 S250 S251) and ("% by weight" phosphorescent compound hole blocking cathode anode light emitting layer range).dm.	US-PGPUB; USPAT; USOCR	AND	ON	2010/02/01 14:21

S253	0	(S249 S250 S251) and ("(% by weight)" phosphorescent compound hole blocking cathode anode light emitting layer range).dm.	US-PGPUB; USPAT; USOCR	AND	ON	2010/02/01 14:22
S254	0	(S249 S250 S251) and (weight phosphorescent compound hole blocking cathode anode light emitting layer range).dm.	US-PGPUB; USPAT; USOCR	AND	ON	2010/02/01 14:22
S255	86	(S249 S250 S251) and ("OLED" "organic electroluminescent" "organic EL")	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/01 14:24
S256	19	S255 and (hole blocking). dm.	US-PGPUB; USPAT; USOCR	AND	ON	2010/02/01 14:24
S257	7	S256 and weight.dcm.	US-PGPUB; USPAT; USOCR	AND	ON	2010/02/01 14:24
S258	1345	S239 and ("electron blocking" "EBL")	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/01 14:28
S259	1161	S258 and (dopant doping doped)	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/01 14:28
S260	20	S259 and ((dopant doping doped) with (weight near3 percent\$3))	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/01 14:28
S261	37598	{313/498-512 315/169.1,169.3 428/690-691,917 438/26-29,34,82 257/40,72,98-100,642-643,759 427/66,532-535,539}.cds.	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/01 15:43
S262	24	"T-T annihilation" and S261	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/01 15:43
S263	0	("OLED" "OLED" "organic electroluminescent" "organic EL") and ("hole blocking" "HBL") and ("electron blocking" "EBL") and weight and ("%" percent\$3) and (dopant doping doped)	EPO; JPO; DERWENT	OR	ON	2010/02/01 16:14
S264	5	("OLED" "OLED" "organic electroluminescent" "organic EL") and ("hole blocking" "HBL" "electron blocking" "EBL") and weight and ("%" percent\$3) and (dopant doping doped)	EPO; JPO; DERWENT	OR	ON	2010/02/01 16:15
S265	1612	(electroluminescen\$2) and (hole near1 block\$3) and (electron near1 block\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/02 06:30
S266	970	(re\$1combination re\$1emission re\$1absorption re\$1capture) and S265	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/02 06:30

S267	244	S266 and @ad< "20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/02 06:30
S268	37636	{313/498-512 315/169.1,169.3 428/690- 691,917 438/26-29,34,82 257/40,72,98-100,642- 643,759 427/66,532- 535,539).ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/02 06:33
S269	40	S268 and (re\$1emission re \$1absorption re\$1capture) and S265	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/02 06:33
S270	34	S269 and @ad< "20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/02 06:33
S271	5	S268 and (re\$1emission re \$1capture) and S265	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/02 06:36
S272	0	S268 and (re\$1capture) and S265	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/02 06:36
S273	0	(re\$1capture) and S265	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/02 06:37
S274	5	(re\$1capture) and S268	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/02 06:37
S275	0	("collision of excitons") and S268 and @ad< "20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/02 06:39
S276	4	(collision near3 exciton\$1) and S268 and @ad< "20030723"	US-PGPUB; USPAT; USOCR	OR	ON	2010/02/02 06:39

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